

Summary

- 5 A digital signal processing (=DSP) receiver for analyzing an optical signal, in particular in a terabit optical network, comprising a receiver input (11; 21; 31) for receiving the optical signal, a photo diode (15a, 15b; 26a, 26b; 36a, 36b), an analog-to-digital conversion (=ADC) unit (16a, 16b; 27a, 27b; 37a, 37b), and a DSP processing unit (17; 28; 38), is characterized in that the DSP receiver
- 10 comprises a splitting unit (12; 22; 33) splitting the optical signal and feeding the split parts into at least two waveguide branches (13a, 13b; 23a, 23b; 34a, 34b), that at least one waveguide branch comprises an optical filtering element (14a, 14b; 24a, 24b, 25a, 25b; 35a, 35b), that each waveguide branch is fed onto a separate photo diode (15a, 15b; 26a, 26b; 36a, 36b), that the signal of each
- 15 photo diode is fed into a separate ADC unit (16a, 16b; 27a, 27b; 37a, 37b), and that the signal of each ADC unit is fed into the DSP processing unit (17; 28; 38). The inventive DSP receiver allows an information recovery with improved data integrity.

20